# APPENDIX 7-14 WATER SHARE CERTIFICATE





OBSC 22264 (8/90)

(CHECH APPRICABLE JOMPANY HEREINANTER REFERRED TO AS THE SURETY)

	Bond for Lost Instrume	ent Fixed Penalty	Bond #980356
Intermountain P	ower Agency and 1	Nevada Electric	Investment Company
as Principal (hereinalier called Prin	ncipal") and Olc Repl	ublic Surecy Co	mpany
duly authorized to transact the busin	ness of indemnity and suretysh	up in the State ofUtah	
and having an office and principal c	elece of business in said State	at P.O. Box 792	<u>0, Murray, Utah 841</u> 07
			'Surety"), are held firmly bound unto
Huntington Cleve	land Irrigation	Company	
heir respective legai representati	ves, successors and assigns	(hereinalter collectively	called "Obligees"), in the sum of
Ten Thousand Eig	_		s (\$ 10,800.00 )
appear; for which payment, well and t tives, successors and assigns, jointl	ruly to be made, the Principal ar y and severally, firmly by these	nd Surety bind themselves, to presents.	successors or assigns, as interest may heir respective hoirs, legal representa-
		•	counterparts this
6th day of No	vember	19 <u>91</u> .	
and that the same has been mislaid	lost, stolen or destroyed and or destroy	cannot be found or produce a new or duplicate instrumer	e #A2631 - 60 Shares  ed, in virtue of which the Principal has not or instruments, or to pay to Principal lation; and
WHEREAS, on the faith of the fore or agreed to comply with said reque	rgoing representations and in co	onsideration of this bond of i	ndemnity, the Obligees have complied
assigns of the Principal, or any of the the hands or power of any of them, the Obligees in order to be canceled all claims, actions and suits, whether charges, counsel fees and other export or originals and/or the issuance of a or originals without surrender thereof on the part of the Obligees or their ror litigate the right of any applicant to	tem, shall in case the mislaid, le or to the hands, custody or power, and shall also at all times ind er groundless or otherwise, and enses of every nature and charm duplicate or duplicates in fleu to f, whether or not caused by, base espective officers, agents, clerk o receive any payment, credit, to duplicates issued in fleu thereo	ast, stolen or destroyed originer of any person, deliver of the same harmless to the said in the real or the paying or creded upon or arising out of inacts and employees and/or on transfer, registration, exchangle, and/or caused by, based	s, legal representatives, successors or pinal or originals be found or come into or cause the same to be delivered unto the Obligees from and against any and all liabilities, losses, damages, costs, nistald, lost, stolen or destroyed original diting of the face amount of the original divertence, accident, oversight or neglect mission or failure to inquire into, contestinge or delivery in respect of the original upon or arising out of any other matter id effect
No change or modification of ochange or modification is in writing			and bond shall be effective unless such ament is sought
		-ALLE	Principal VX
	(L.S)	By	Barra (seal)

(OVAL)

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known to me (or proved to me on the basis of satisfactory evidence) to be the person that executed the within instrument as president (or scretary) or on behalf of the corporation therein named and acknowledged to me that the corporation executed it.

ice Tresident

**Notary Public** 



LISA ARIOTTI
Notary Public
STATE OF UTAH
My Commission Expires
August 31, 1993
343 3 300 W, Height, UT 84528

T 1064

F 500

# APPENDIX 7-15 PROBABLE HYDROLOGIC CONSEQUENCES DETERMINATION

# R645-301-728 Probable Hydrologic Consequences

#### **Determination**

This document has been prepared in accordance with requirements of the State of Utah R645 Coal Mining Rules. The format follows the regulations R645-301-718.100 through R645-301-728.400.

# R645-301-728.100 Determination

The mine dewartering is the primary mechanism by which the groundwater system may be impacted. As stated in Section 7.24.1, "it is believed that the water emitting from seeps and springs in State Leases ML-21568 and ML-21569, as well as in the surrounding areas, originate from perched aquifers with no direct communication with the regional Blackhawk - Star Point aquifer. Thus, dewatering resulting from mining the Hiawatha Coal of the Blackhawk Formation has little potential for impact". The mine is presently making approximately 100 gallons of water per minute. The vast majority of this water is used in the operation, with the remainder stored in an underground sump. Discharge for the mine has occurred only 3 times in the last 5 years.

As mentioned in Section 7.24.2, "The permit area is drained entirely by ephemeral watersheds. These watersheds are steep (with average slopes often exceeding 50 percent) and well vegetated (with percent covers also often exceeding 50 percent)". The primary potential for impact to surface water is in the form of increased sedimentation from the operations. There is also some potential for impact to quantity from excessive pumping from Crandall Creek.

The primary potential for impact to surface water is in the form of increased sedimentation from the operations. There is also some potential for impact to quantity, from excessive pumping from Crandall Creek.

Impacts to the surface water quality and quantity are minimized through the installation and maintenance of surface runoff and sediment control structures, and a commitment (Section 7.24.2, p. 7-46 not to pump from Crandall Creek at a rate that will cause the instream flow to decrease below the minimum required rate.

In addition, ground water and surface water quantity and quality are monitored on a year-round basis to determine seasonal flow conditions for the entire permit and adjacent areas, as described under Section 7.31.2 of the plan. Further, handling plans have been implemented for earth, refuse and acid-toxic forming materials, which will prevent or control, using the best technology currently available, the discharge of pollutants to the hydrologic system (Section 7.31.1).

Based on the above, there is some potential for the operation to have an impact on the ground water and surface water resources of the area; however, the impacts are expected to be minimal due to the implementation of control and protection systems as described above and further detailed in Chapter 7 of this permit. Therefore, the "Probable Hydrologic Consequences" of this operation are expected to be minimal, if not negligible.

### R645-301-728.200 Basis for Determination

The PHC Determination for this operation is based on baseline hydrologic, geologic and other information gathered specifically for this site and the surrounding area by the permittee. Additional, regional information has been provided through various published reports as noted in the plan.

Specific groundwater information is provided in Section 7.24.1 of Chapter 7. Surface water data is presented in Section 7.24.2. Geologic and Climatological information is provided in Sections 7.24.3 and 7.24.4, respectively.

## R645-301-728.300 Findings

7.28.310 Chapter 7, Sections 7.24.1 and 7.24.2 indicate the potential for adverse impacts to the hydrologic balance to be minimal. The basis for such determinations is through extensive studies, monitoring, past history and performance of the on-going operation, and various protection plans for operations and reclamation. The above information is detailed in Chapter 7 of the permit and is not repeated here.

7.28.320 Acid and toxic forming materials are not known to exist at this site; however, a plan has been developed to protect the surface and ground water in the event such materials are encountered. This plan is detailed in Chapter 7, Section 7.31.3.

7.28.330 The following are expected impacts from the coal mining and reclamation operation:

7.28.331 Sediment yield will naturally increase from areas disturbed for the operation. A runoff curve number of 69 has been determined for the undisturbed area, 75 for reclaimed areas within the disturbed area, and a number of 90 is used for runoff from disturbed areas (roads and pads). The majority of the disturbed area runoff is directed to the sediment pond is described in Chapter 7, Section 7.42.22. Required sediment storage for the pond has been determined to be 0.30 acre feet, including 0.27 acre feet from disturbed areas and 0.3 acre feet from undisturbed and reclaimed areas over a 3 year period. Storm runoff was determined to be 0.68 acre feet. The pond is designed with a total storage volume of 0.98 acre feet, which allows for complete containment of sediment.

There are 7 small areas which do not drain to the sediment pond, as shown on Plates 7-5 and Figure 7-18a, and described in Chapter 7, Section 7.42.21. Sediment yield from these areas is minimized through the use of sediment traps, straw bale dikes, silt fences and vegetation as described in Section 7.42.21.

Sediment yield is therefore minimized from the disturbed areas through the installation and maintenance of the above described controls.

728.332 Water quality parameters, including acidity, total suspended solids and total dissolved solids, are not expected to be impacted by the mining or reclamation operations. This determination is based on information provided in Chapter 7, Sections 7.24.1 and 7.24.2, and by results of the on-going water monitoring program detailed in Section 7.31.2.

It is unlikely that groundwater quality or quantity will be affected by the underground mining operation (Section 7.24.1). There is some potential for impacts to the surface water; however, once again, these are expected to be minimal for the following reasons:

- (1) The entire permit area is drained by ephemeral watersheds;
- (2) Sediment controls are in place and maintained to minimize sediment loading to drainages;
- (3) No acid or toxic forming materials are known to be present;
- (4) All discharges from the sediment pond (or mine) are in accordance with requirements of a U.P.D.E.S. Permit;
- (5) Historical data from this site (which is summarized in the Annual Report) shows no indication of mine related impacts on the hydrology of the area;
- (6) The water monitoring program will continue to be followed as described in Chapter 7, Section 7.31.2. Results will continue to be analyzed (and any problem areas noted will be corrected to prevent further impacts to the hydrology.

728.333 The potential for flooding is minimized by the design and installation of adequately sized diversions, sediment pond and velocity control structures as described in Chapter 7, Section 7.40. All diversions are sized for a 25 year - 24 hour storm event. Ditches, culverts and sediment pond are designed for

a 10 year - 24 hour storm event. Ditches, culverts and sediment pond are designed for a 10 year 24 hour storm event.

Although there is no stream alteration, there is some potential for the Crandall Creek to impinge upon the sediment pond embankment due to its close proximity. The toe of the sediment pond has therefore been fortified with an additional 2 feet of 12.5 inch D50 rip-rap for protection. An analysis of the Crandall Creek flow and pond protection indicates it is adequate for a return period in excess of 10,000 years (Section 7.42.22, p.7-100). A slope stability analysis has also been performed on the pond indicating it meets required safety factors (Chapter 7, Table 7-7).

728.334 As discussed in Chapter 7, Section 7.24.1, the mining operation is expected to have little impact on groundwater. The entire mine is making approximately 100 gallons of water per minute. The majority of the inflow is used for the mining operation, and the mine has only discharged water 3 times in the last 5 years. Mine inflow is believed to be from perched aquifers, which has a minimal, if any, effect on the groundwater availability for the area.

Surface water availability could be impacted by excessive pumping of water from Crandall Creek for the operation. This is not expected to occur for the following reasons:

- (1) The mine presently makes enough water for its needs, and pumping has not been necessary for 2 years;
- (2) The company has committed to not pump from Crandall Creek at a rate that will cause the instream flow to decrease below the minimum required rate (Chapter 7, Section 7.24.2, p. 7-46).

There is also some potential for impact to springs and seeps through subsidence. Springs and seeps have been identified through intensive surveys (Tables 7-1 and 7-2), and selected sources are being monitored. Water rights have also been researched and are provided in Chapter 7, Tables 7-3 and 7-6.

An alternative water source plan has been developed in the event any water rights or springs/seeps are adversely affected by the mining operation or reclamation activities. This plan is detailed in Chapter 7, Section 7.27.

7.28.335 Additional information will be provided if deemed necessary by the Division.

### R645-301-728.340 N/A

This is an underground operation.

### <u>R645-301-728-400</u> <u>Updated PHC</u>

This document is provided as an up-dated PHC for the permit renewal in accordance with the State of Utah R645-Coal Mining Rules.